

WHAT IS CLAIMED IS:

1. A device for supplying pressurized air to the tire of a vehicle wheel through the wheel hub, comprising:

a first, non-rotatable ring (11) to be mounted adjacent to a non-rotatable race (1) of a bearing unit (A),

a second, rotatable ring (12) to be mounted fast for rotation with a rotatable race (2,3) of the bearing unit (A),

at least a first air passage (13, 113) formed through the first, non rotatable ring (11),

at least a second air passage (14) formed through the second rotatable ring (12),

a sealing device (15, 16) interposed between the first (11) and the second (12) rings, defining therewith an intermediate chamber (17) communicating with said first (13, 113) and second (14) passages.

2. A device according to claim 1, wherein:

the first, non rotatable ring (11) is a radially outer ring, and the first air passage (13, 113) is formed between an outer surface (20, 21) and an inner cylindrical surface (11a) of the first non-rotatable ring (11),

the second, rotatable ring (12) is a radially inner ring, and the second air passage (14) is formed between an outer cylindrical surface (12a) and an inner cylindrical surface (12b) of the second rotatable ring (12).

3. A device according to claim 2, wherein the first air passage (13) is a radial passage formed between a cylindrical outer surface (20) and an inner cylindrical surface (11a) of the first, non-rotatable ring (11).

4. A device according to claim 2, wherein the first air

passage (113) is formed between a side surface (21) and an inner cylindrical surface (11a) of the first, non rotatable ring (11).

5. A device according to claim 1, wherein the first, non-rotatable ring (11) forms an axially protruding portion (18) for coupling with the non-rotatable race (1) of the bearing unit (A).

6. A device according to claim 1, wherein the first, non-rotatable ring (11) forms a seat (22) for coupling with a device (C) for detecting the rotational speed of the rotatable ring (12).

7. A bearing assembly for the hub of a motor vehicle wheel, comprising:

a device (B) for supplying pressurized air as claimed in any one of the preceding claims, and

a bearing unit (A) with a non-rotatable race (1) adjacent to said non-rotatable ring (11) of the device (B), at least one rotatable race (2, 3) adjacent to said rotatable ring (12) of the device (B) and fast for rotation therewith, and rolling elements (4, 5) interposed between the non-rotatable race (1) and the rotatable race(s) (2, 3) of the bearing unit.

8. A bearing assembly according to claim 7, comprising:

a device (B) for supplying pressurized air according to claim 5, and

a bearing unit (A) wherein the non-rotatable race (1) has a seat (6) for coupling with said axially protruding portion (18) of the non-rotatable ring (11) of the device (B).

9. A bearing assembly according to claim 7, further comprising a device (C) for detecting the speed of rotation of the rotatable ring (12) of the device (B) for supplying pressurized air, wherein the detecting device (C) includes:

a sensor (8) carried by a mounting element (7) mounted onto the non-rotatable ring (11) of the air supplying device (B) and

a pulse wheel (9) mounted on the rotatable ring (12) of the air supplying device (B) and facing the sensor (8).

10. A bearing assembly according to claim 9, wherein:

the non-rotatable ring (11) of the device for supplying pressurized air (B) has at least one first air passage (113) that opens on a side surface (21) of said first ring (11), and

the mounting element (7) of the detecting device (C) forms at least one air passage (23) communicating with said at least one first air passage (113).